

NEW HAMPSHIRE WATER SUPPLY AND POLLUTION CONTROL COMMISSION

LAKE TROPHIC DATA

MORPHOMETRIC:

LAKE <u>Saco Lake</u>	LAKE AREA (HA) <u>3.64</u>
TOWN <u>Carroll</u>	MAXIMUM DEPTH (M) <u>1.8</u>
COUNTY <u>Coos</u>	MEAN DEPTH (M) <u>1.0</u>
RIVER BASIN <u>Saco</u>	VOLUME (M ³) <u>37,500</u>
LATITUDE <u>44 ° 13'N</u>	MUD SURFACE AREA (HA) <u>6.30</u>
LONGITUDE <u>71 ° 25'W</u>	RELATIVE DEPTH <u>0.9</u>
ELEVATION (FT) <u>1890</u>	SHORE CONFIGURATION _____
SHORE LENGTH (M) _____	AREAL WATER LOAD (M/YR) <u>39.10</u>
WATERSHED AREA (HA) <u>136.5</u>	FLUSHING RATE (YR ⁻¹) <u>38.0</u>
% WATERSHED PONDED <u>0%</u>	PHOSPHORUS RETENTION COEFF. <u>0.40</u>

BIOLOGICAL:

DATE	3 FEB 1986	6 SEP 1985
DOM. PHYTOPLANKTON (% total) ¹	tiny pennate diatom(35%)	No dominant
²	Tabellaria (30%)	
NUMBER OF ALGAL GENERA	9	4
SPECIES DIVERSITY		0.86
CHLOROPHYLL a (µg/L)		1.90
DOM. ZOOPLANKTON (% total) ¹	sparse - no dominant	Calanoid copepod (40%)
²		Diaphanosoma
ROTIFERS/LITER	9	< 1
MICROCRUSTACEA/LITER	4	52
TOTAL ZOOPLANK. CNTS (cells/L)	13	52
VASCULAR PLANT ABUNDANCE		Scattered
DOMINANT VASCULAR PLANTS ¹		Non-flowering bottom growth
²		
³		
SECCHI DISK TRANSPARENCY (M)		1.5 V.O.B.
BOTTOM DISS. OXYGEN (mg/L)	10.3	9.0
SEDIMENT: % ORGANIC MATTER		

LAKE TYPE: A natural pond.

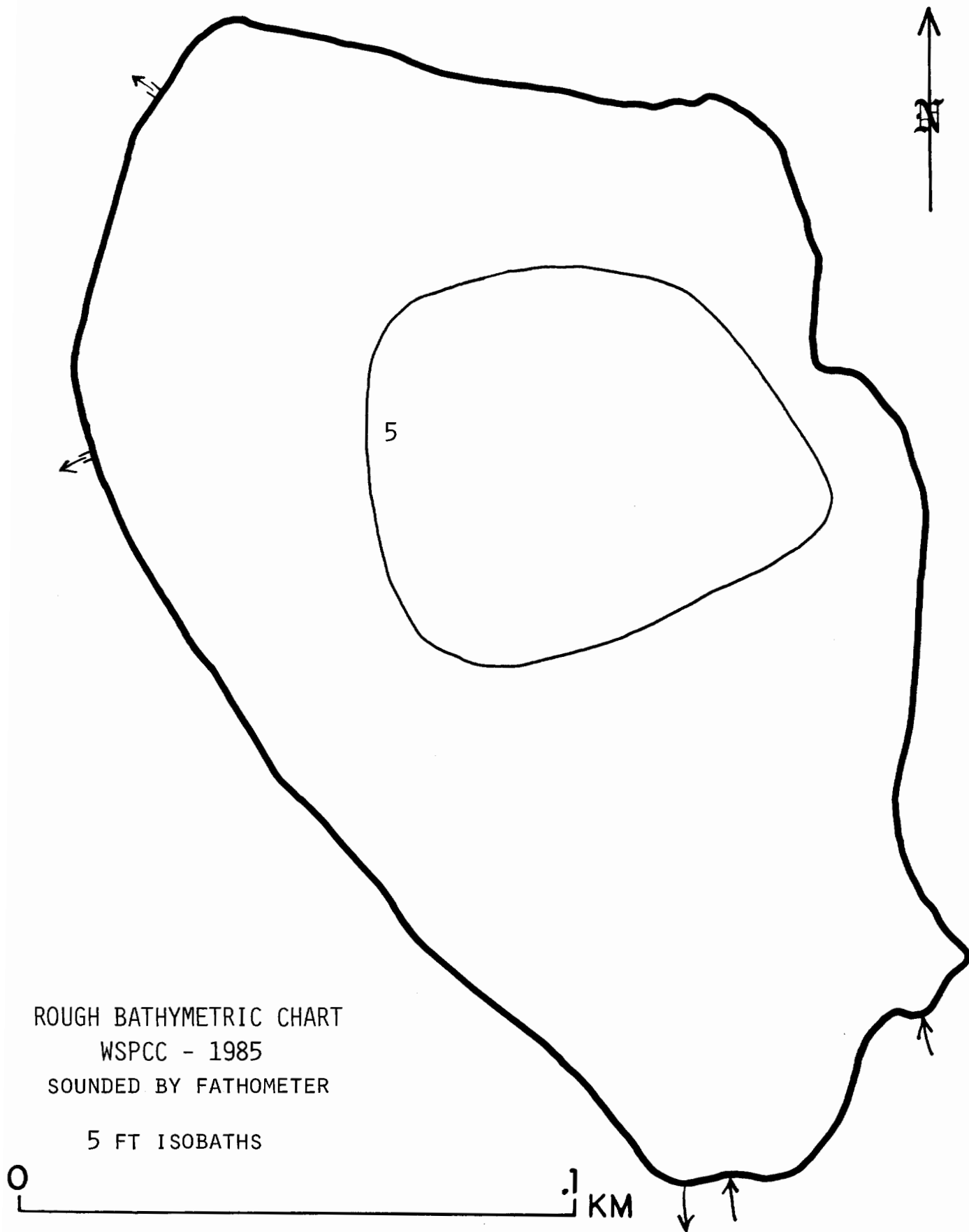
SUMMER THERMAL STRATIFICATION: YES _____ NO X WEAK _____

IF YES, VOLUME OF HYPOLIMNION _____ (m³) THERMOCLINE DEPTH _____ (m)

CHEMICAL: (mg/L unless indicated otherwise)		LAKE: Saco Lake					
	WINTER	SUMMER					
DATE	3 FEB 1986	6 SEP 1985					
DEPTH (M)	1.5	1.0					
pH (UNITS)	5.1	5.3					
ALKALINITY (I. P.)	0.17	0.21					
ALKALINITY (F.E.P.)	1.9	1.6					
NITRITE+NITRATE NITROGEN		< 0.05					
TOTAL KJELDAHL NITROGEN		0.35					
TOTAL PHOSPHORUS	0.011	0.015					
SPEC. CONDUCT. (μMhos/cm)	36.5	16.5					
APPARENT COLOR (UNITS)	30	20					
TRUE COLOR (440 nm)(UNITS)	NR	NR					
MAGNESIUM		0.28					
CALCIUM		1.1					
SODIUM		< 3					
POTASSIUM		< 0.5					
CHLORIDE		< 2					
TN : TP		23					
INORG-N : INORG-P							
[Mg+Ca] : [Na+K]							
CALCITE SATURATION INDEX		6.6					
* = NOT DEFENSIBLE NR = NO RESULT							
TROPHIC CLASSIFICATION: 1985							
		D.O.	S.D.	PLANT ABUND.	CHL a	TOTAL PTS.	TROPHIC CLASS.
CLASSIFICATION POINTS:		-	2	1	0	3	Oligo.
COMMENTS: <ol style="list-style-type: none"> 1. Bottom areas covered with fine silt. 2. No launch site, but flat area near dam is adequate to launch 3. No motor boats allowed. 4. No cottages on the pond. 							

SACO LAKE

CARROLL



FIELD DATA SHEET

WATER BODY Saco LakeTOWN CarrollBY WSPCCDATE COLLECTED 6 September 1985WEATHER Overcast/drizzle

STATION	DEPTH (M)	TEMP. (°C)	*DISSOLVED OXYGEN	OXYGEN: % SATURATION			
DEEP SPOT	0.1	18.5	9.1	99%			
	0.5	18.5	9.1	99%			
	1.0	18.5	9.1	99%			
	1.5	18.5	9.0	98%			

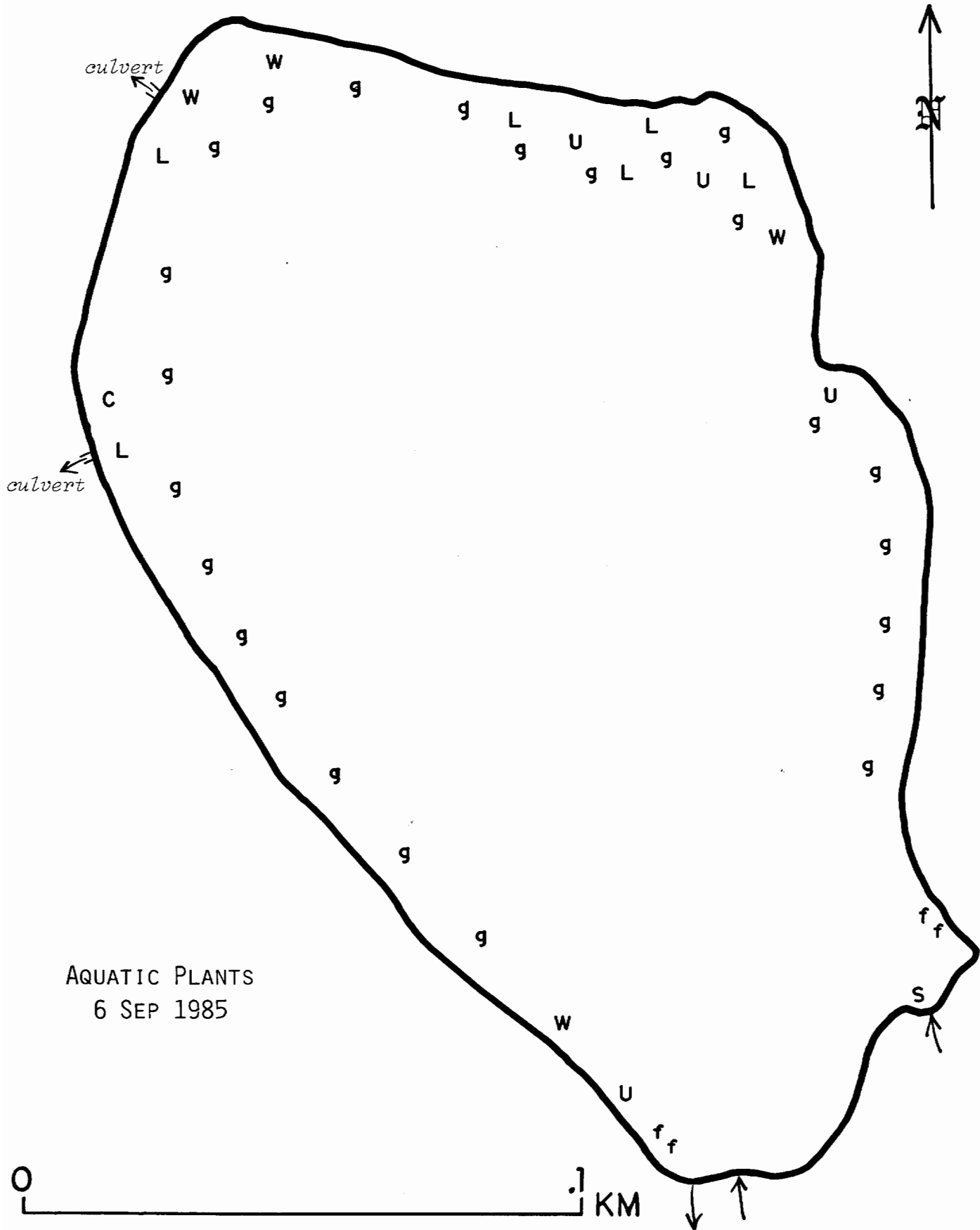
SECCHI DISK (M) 1.5 V.O.B.BOTTOM DEPTH (M) 1.5TIME 1200 hrs.

COMMENTS: 1. Heavy rains prior to lake samplings.

* Dissolved oxygen values in mg/L

SACO LAKE

CARROLL



AQUATIC PLANT SURVEY

LAKE Saco Lake TOWN Carroll DATE 6 SEP 85 BY WSPCC

[illegible]

OVERALL ABUNDANCE Scattered

GENERAL OBSERVATIONS:

1. Various types of non-flowering bottom growth were very common along the entire shore and probably over most, if not all, of the bottom. Bottom growth came up on the anchor at the deep spot. The bottom growth included grass-like, sedge-like, and thread-like varieties.
2. An overall rating of scattered was assigned, although the bottom growth was common.